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Docket Control
Arizona Corporation Commission
1200 W. Washington Street
Phoenix, AZ 85007

March 15, 2019

Re: Docket No. RU-00000A-18-0284 Sierra Club Comments on Arizona State University Modeling Tool Proposal

Dear Commissioners:

Sierra Club appreciates the opportunity to provide input regarding the proposal by the Lightworks Initiative at Arizona State University to develop a tool for use by the Commission to model and evaluate the impact of bringing various types of generating resources onto the grid, including the integration of renewable energy and the retirement of coal and gas plants. Sierra Club fully supports utilizing data-driven analysis and modeling to inform decision-making, but the description provided by the Lightworks Initiative raises a few questions and areas of concern regarding the Commission's use or reliance on the proposed tool.

Sierra Club supports the Commission's interest in more deeply assessing modeling performed by Arizona utilities as well as stakeholders, and providing itself with the opportunity to learn more about its own system through informed technical assessment. However, Sierra Club notes that any model inherently contains both explicit and implicit assumptions, both in substance and structure, and it is important to be transparent in the intent and limitations of any given modeling effort, particularly those used to supplement decision-making processes. An old adage says "all models are wrong, but some are useful."

When electricity system models are used by utilities or intervenors, stakeholders are provided the opportunity to probe, test and critique. This process allows stakeholders to come to a common understanding of a model's limitations. In contrast, a model used by Commission advisory and intervention staff to assess, *post hoc*, modeling conducted by the utility and stakeholders risks becoming yet another black box, and potentially not representative of a transparent regulatory process. To ensure that this does not become the case, and that the Commission is able to take full advantage of the technical assistance offered by the Lightworks Institute, we encourage the

Commission to make explicit how such a tool will be used and relied upon, and provide the opportunity for transparency with all stakeholders.

First, the Sierra Club urges the Commission to ensure that the development and implementation of the tool are fully transparent and allow for input by interested stakeholders. Among other things, Lightworks' proposal notes that "[a]ll inputs and outputs will be known to the Commission and Staff." Sierra Club recommends that the public also have access to the inputs and outputs to fully understand the results and provide well-informed comments. Sierra Club also recommends that intervenors have the opportunity to provide comment on the model use, assumptions, and interpretation if the model is used for decision-making purposes.

Second, Sierra Club urges the Commission to formulate with Lightworks an explicit scope of work or letter of intent with respect to Lightworks' engagement. Lightworks' proposal claims that it will remain agnostic to assumptions or inputs. However, developing a modeling tool inherently requires selecting a scope and purpose for the analysis, and different models take different levels of detail. Electricity system models span a gamut of uses, from regional models designed to test policies and market structures, to capacity expansion models designed to find least cost demand and supply options, to transmission and distribution system models designed to test reliability at a granular level. The proposal from Lightworks specifies that the team will build a commitment, dispatch and power flow model, which by its nature is designed to answer a relatively narrow set of questions regarding system reliability. Sierra Club urges an explicit statement of intent with respect to the design of the model, including a description of how Lightworks will fill information gaps in the absence of information from the utilities, stakeholders, or Commission staff.

While Lightworks seeks to provide services to the Commission and Staff, the role of the organization is relatively ambiguous. The proposal notes that "[a]t times ASU can serve as unpaid consultants. . . ." We ask that the Commission clarify in what capacity ASU would do so. For example, would ASU work for intervening staff or the Commission directly? If ASU works on behalf of intervening staff, do they become answerable for their work in a proceeding? If ASU works on behalf of the Commission directly, are they precluded from *ex parte* communications with other parties? We encourage Lightworks and the Commission to make ASU's participation transparent and open such that it remains an independent entity and does not become just another party to the proceedings.

Third, the Lightworks team appears to have a gap in the requisite expertise in energy systems planning to assess and deepen utility-systems planning. From our review of biographies and relevant research, Dr. Hedman appears to be the only identified faculty member with specific background in energy systems modeling; Dr. Hedman's planning is focused on transmission and system stability aspects of reliability – itself a subset of energy systems planning. The practical effect of the proposed tool may be to focus on system impacts without looking at larger questions regarding optimization, build pathways, or economic decisions. While Sierra Club appreciates

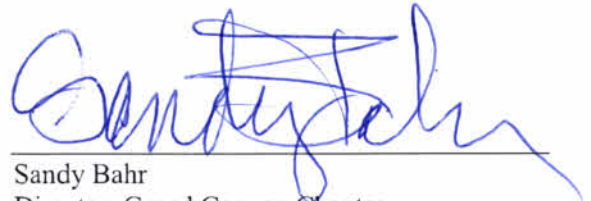
the deep technical expertise brought by the proposed team, we encourage ASU to identify individuals with background in long-run system planning in addition to reliability assessment.

Finally, there has been much discussion within the Commission about ex parte rules, but Lightworks' proposal will include meetings with staff and commissioners on modeling and modeling assumptions out of view of other parties. To ensure full transparency, the public should at least receive notice of these meetings or, better yet, be engaged throughout the process.

Thank you for your consideration,



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